

RES:

- Solar thermal
- PV
- Biogas
- Heat pumps
- Biomass
- Absorption chiller
- Wind
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Changes in the production and energy supply:

- Process optimisation
- Process intensification
- Heat integration
- Storage
- Energy efficiency
- solar integration
- Biobased products
- Emerging technologies
- Cleaner production
- Heat Recovery

Unit operations:

- Cleaning
- Drying
- Evaporation and distillation
- Blanching
- Pasteurization
- Sterilization
- Cooking
- Other process heating
- General process heating
- Heating of production halls
- Cooling of production halls
- Cooling processes
- Melting
- Extraction
- Bleaching
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Project name: Ennstal Milch KG

Project description:

The Enns milk KG is part of the rural cooperative. Their product range includes cheese, yogurt, desserts, spreads and other products. The annual demand for electrical energy is about 9 GWh. Because of the increased cooling demand is the demand for electricity higher in summer by about 10% than in winter. The main focus was on renovation and refurbishment of two refrigeration systems, optimization of compressed air and heat recovery from ventilation systems which made the production process productive

Sector: food & beverages

Sub sector: milk products

Country: Austria

Company scale: Medium (< 250 people and/or < 50 mio€ turnover)



<u>Investigated Company:</u> Ennstal Milch KG, Austria	<u>product output</u> <u>product output</u> <u>product output</u> <u>product output</u>	40,000 tons/a tons/a tons/a tons/a
<u>Employees:</u> 150	<u>Turn over:</u> not specified	
<u>Unit operations involved:</u> Overall production plant	<u>Temperature and Energy demand [°C, MWh/a]:</u> Steam : 190 - 220 °C , Pressure: 9-10.8 bar Heat demand: 20,000 MWh/a Electricity demand: 9,000 MWh/a	<u>Equipment for heat/cooling generation:</u> Heat: Process heat and hot water to steam from biomass plant Stainach Cooling: Refrigeration systems
<u>Process optimisation:</u>	<u>System optimisation:</u> Replacement of compressor to variable speed compressor Addition of heat recovery to existing ventilation systems by composite materials	<u>Energy supply technology:</u> cooling old: Chiller new: chiller with Ammonia R717
<u>Energy saved [%], MWh/a]:</u> 1,175.6	<u>Fossil energy saved [%], MWh/a]:</u> Not specified	<u>CO2 emissions saved [%], t/a]:</u> Not specified
<u>Link to further information:</u> www.energie-consulting.at	<u>Co-ordinator, realising partner:</u> sattler energie consulting gmbh	<u>Filling in person:</u>